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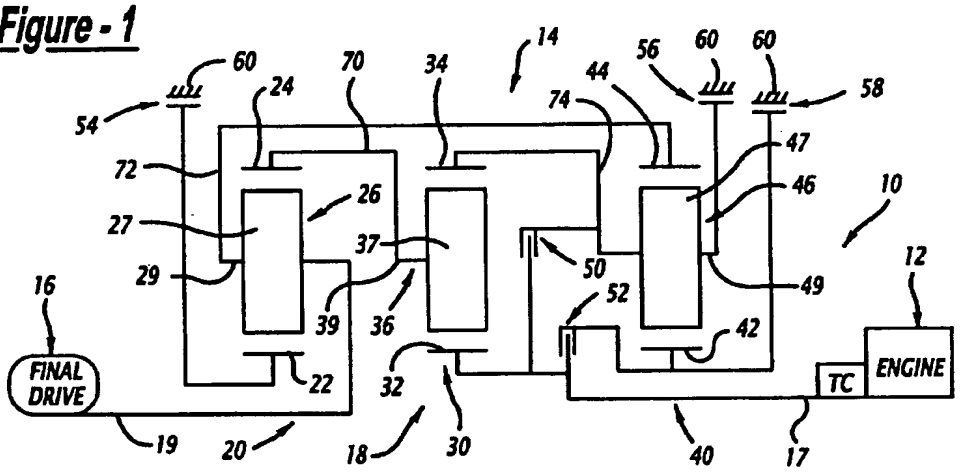
(54) Six-speed planetary transmission mechanisms with two clutches and three brakes

(57) A family of transmissions includes three planetary gear sets (20,20,40) and five torque-transmitting mechanisms. Each family member may be employed in a powertrain to provide at least six forward speed ratios and one reverse speed ratio when the torque-transmitting mechanisms are engaged in combinations of two in a selected manner. Each planetary gear set (20,30,40) includes three planetary members; namely, a sun gear, a ring gear, and a planet carrier assembly member. The first member of the first planetary gear set (20) is continuously connected with the first member of the second planetary gear set (30). The second member of the first planetary gear set (20) is continuously connected with a first member of the third planetary gear set (40). The second member of the second planetary gear set (30) is continuously connected with the second member of the third planetary gear set (40). An input shaft (17) is continuously connected with at least one of the members of the planetary gear sets and an output shaft (19) is continuously connected with at least one other member of the planetary gear sets. Three of the torque-transmitting mechanisms are of the selectively engageable stationary type torque-transmitting mechanisms, or brakes, and two of the torque-transmitting mechanisms are rotating type torque-transmitting mechanisms, or clutches.

Figure - 1



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